

Exhibit 7

In The Matter Of:

FEDERAL HOUSING FINANCE AGENCY, etc.

v.

***HSBC GOLDMAN, SACHS & CO. and ALLY
FINANCIAL INC.***

***JERRY A. HAUSMAN - Vol. 1
July 30, 2014***

MERRILL CORPORATION

LegalLink, Inc.

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UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

-----x
FEDERAL HOUSING FINANCE AGENCY, etc.,

Plaintiff,

vs.

Case No.
11 Civ. 6189
(DLC)

HSBC NORTH AMERICA HOLDINGS INC.,
et al.,

Defendants.

-----x
FEDERAL HOUSING FINANCE AGENCY, etc.,

Plaintiff,

vs.

Case No.
11 Civ. 6198
(DLC)

GOLDMAN, SACHS & CO., et al.,

Defendants.

-----x
FEDERAL HOUSING FINANCE AGENCY, etc.,

Plaintiff,

vs.

Case No.
11 Civ. 7010
(DLC)

ALLY FINANCIAL INC., et al.,

Defendants.

-----x

DATE: July 30, 2014

WITNESS: Jerry A. Hausman

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July 30, 2014

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9:30 a.m.

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Videotaped deposition of JERRY A.
HAUSMAN, held at the offices of Quinn
Emanuel Urquhart & Sullivan LLP, 51 Madison
Avenue, New York, New York, before Gail F.
Schorr, a Certified Shorthand Reporter,
Certified Realtime Reporter and Notary
Public within and for the State of New York.

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2 that's what you're going to get. I mean 10:03:16
3 in other words he runs the regressions 10:03:19
4 county by county, so that's what I was 10:03:20
5 trying to explain. 10:03:22

6 Q. Yes, okay. But that's how you 10:03:23
7 would expect one would try to do it, but 10:03:24
8 you wouldn't remove all the data that he 10:03:26
9 removed? 10:03:28

10 A. Yeah, and it leads to a 10:03:28
11 downward biased forecast standard 10:03:29
12 deviation by doing that. 10:03:32

13 Q. I read your formula, I'm 10:03:33
14 looking forward to talking to you about 10:03:34
15 that one. 10:03:37

16 All right. And my question is 10:03:37
17 do you know sitting here today whether 10:03:39
18 that assessed value to sales price ratio 10:03:40
19 in terms of how he trims the data, 10:03:46
20 removes the data, is it done by way of 10:03:49
21 the percentage of the ratio or by sort? 10:03:51
22 In other words, does he line them up when 10:03:56
23 he trims or does he take them, the middle 10:03:57
24 30 percent plus or minus 15 by 10:04:00
25 essentially the value of the ratio? 10:04:02

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2 A. I don't understand the 10:04:04
3 question. 10:04:09

4 Q. Okay. If you're going to 10:04:09
5 decide to remove data on either side of a 10:04:12
6 median there are a number of ways you can 10:04:15
7 go about doing that, right, sir? 10:04:17

8 A. I presume. 10:04:19

9 Q. You've done this before, 10:04:19
10 right, sir? 10:04:22

11 A. I don't do this. This is 10:04:22
12 really bad econometric practice. 10:04:24

13 Q. In your really good 10:04:26
14 econometric practice that you've written 10:04:28
15 about, you have trimmed data, have you 10:04:30
16 not, sir? 10:04:32

17 A. Yes, but you have to take 10:04:33
18 account of it in terms of statistics. 10:04:34
19 You just can't trim it. 10:04:36

20 Q. No, I understand that. 10:04:37

21 A. Yes. 10:04:38

22 Q. And so my question is, is 10:04:38
23 that, and we'll get to that, my question 10:04:40
24 is plus or minus, if you're applying a 10:04:41
25 plus or minus 15 range around a medium -- 10:04:44

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2 median and you're trimming out the rest, 10:04:47

3 there are different ways about going 10:04:49

4 about that, right, sir? 10:04:51

5 A. In principle, yes. 10:04:53

6 Q. One of the ways you can go 10:04:54

7 about that is to line them all up by way 10:04:55

8 of a sorting basically, just put them all 10:04:57

9 in order and just remove them, right, do 10:05:00

10 you understand what I'm asking? 10:05:04

11 A. Well keep going. 10:05:07

12 Q. I'm asking if that's one way 10:05:08

13 you can go about doing it? 10:05:09

14 A. Well the way that I would 10:05:11

15 think about it which I think may be 10:05:12

16 equivalent to what you're doing, is you 10:05:14

17 look at the error term from the 10:05:16

18 regression and so if you look at the 10:05:19

19 ratio, I think that may be equivalent to 10:05:20

20 looking at the error term, but I can't 10:05:22

21 say that for sure. 10:05:24

22 Q. My question is do you 10:05:26

23 understand what I mean by lining them up 10:05:28

24 by sort, by putting them in order of 10:05:30

25 sorting? 10:05:35

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2 A. I think I looked at his 10:06:24
3 description and then I had discussions 10:06:26
4 with Dr. Rainey. 10:06:27

5 Q. When you say you looked at his 10:06:28
6 description, you mean the report or in 10:06:30
7 the R code? 10:06:32

8 A. The report as I remember it. 10:06:32

9 Q. Did you ever review his R 10:06:33
10 code? 10:06:36

11 A. No. 10:06:36

12 Q. Did Dr. Rainey, to your 10:06:36
13 knowledge, ever review his R code? 10:06:38

14 A. Yes, so far as I know. 10:06:40

15 Q. Did you rely upon Dr. Rainey's 10:06:41
16 discussion with you about the actual 10:06:44
17 functionality of the Greenfield AVM R 10:06:46
18 code? 10:06:49

19 A. Yes. 10:06:49

20 Q. And what information, if any, 10:06:50
21 about how the R code actually functioned 10:06:53
22 did you rely on from Dr. Rainey? 10:06:55

23 A. No, it was just a description 10:06:57
24 of what Dr. Kilpatrick was doing, which, 10:06:58
25 you know, to the best of my ability I 10:07:00

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2 describe in my report.

10:07:01

3 Q. And then you don't kind of put
4 it out here, but then you take issue with
5 his high forecast error, right?

10:07:02

10:07:09

10:07:11

6 A. Yes.

10:07:13

7 Q. I can't quite tell from your
8 report. You take issue with his removal
9 of homes after 2008?

10:07:14

10:07:16

10:07:18

10 A. No, I didn't take issue with
11 that.

10:07:21

10:07:22

12 Q. You're okay with that one?

10:07:22

13 A. Well, I didn't take issue with
14 it.

10:07:23

10:07:26

15 Q. All right. Fair enough. I
16 appreciate your candor. All right. Page
17 3, top bullet. Now we get into your
18 prediction error. All right. So he
19 doesn't properly do a backlog
20 transformation in your view, right?

10:07:26

10:07:27

10:07:30

10:07:33

10:07:35

10:07:37

21 A. Yes. I wish he'd admit it,
22 but maybe he will.

10:07:39

10:07:42

23 Q. Well we'll talk about that.

10:07:43

24 A. You're going to argue with me
25 about that. That will be interesting.

10:07:45

10:07:47

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2 Q. I don't know, I've heard 10:07:48
3 different things from people in different 10:07:50
4 worlds about that one, but in any event, 10:07:51
5 you have a problem with the backlog 10:07:53
6 transformation? 10:07:55

7 A. Yes. 10:07:55

8 Q. It wasn't done in your view, 10:07:56
9 correct, sir? 10:07:58

10 A. It wasn't done correctly. 10:07:58

11 Q. It wasn't done correctly, 10:07:59
12 correct. In connection with correcting 10:08:00
13 for it, though, you have to calculate 10:08:02
14 sigma, right? 10:08:06

15 A. Sigma squared, yes. 10:08:07

16 Q. All right. And in connection 10:08:09
17 with calculating sigma squared in making 10:08:11
18 the adjustment for the backlog 10:08:14
19 transformation you establish in your view 10:08:16
20 that Dr. Kilpatrick's AVM values are very 10:08:18
21 biased low, right? 10:08:21

22 A. Yes, he should use the 10:08:22
23 forecast standard deviation for the 10:08:24
24 sample that you're doing the back 10:08:27
25 transformation for. 10:08:29

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2 addition of whatever inferences you're 10:12:14

3 going to offer in connection with the 10:12:16

4 calculation of the coefficient in Goldman 10:12:18

5 of the assessed value to -- excuse me, 10:12:21

6 the analysis of the coefficient of the 10:12:24

7 assessed value sale price? 10:12:26

8 A. The assessed value, yes. 10:12:28

9 Q. That's the sum and substance 10:12:30

10 of your opinions? 10:12:31

11 A. Yes, and of course what comes 10:12:32

12 later, yes. 10:12:34

13 Q. I'm just asking high level. 10:12:35

14 A. Yes, we're on the same page. 10:12:36

15 Q. All right, very good. There's 10:12:37

16 nothing else you're planning to testify 10:12:38

17 about at trial, right? 10:12:40

18 A. Not so far as I know. 10:12:41

19 Q. Very good. And you haven't 10:12:43

20 been asked to do anything else in 10:12:46

21 connection with trial at least at this 10:12:47

22 time, right, sir? 10:12:49

23 A. No, I mean I could be asked 10:12:49

24 subsequently, as you know. 10:12:51

25 Q. Of course. I expect every 10:12:52

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2 good expert to say that. I don't mean 10:12:53
3 that in any way as a criticism. That's 10:12:54
4 up to your lawyers though, right, and the 10:12:57
5 court? 10:12:59

6 A. Yes. 10:12:59

7 Q. Very good. All right. So 10:12:59
8 your training is in statistics and 10:13:00
9 econometrics, correct, sir? 10:13:03

10 A. And economics. 10:13:04

11 Q. And economics. Do you have 10:13:05
12 any formal educational training in real 10:13:07
13 estate? 10:13:09

14 A. No. 10:13:09

15 Q. You're not a broker? 10:13:10

16 A. No. 10:13:11

17 Q. Well, you never know. You 10:13:14
18 could have worked your way through 10:13:15
19 college as a broker. All right. You're 10:13:16
20 not a broker, right? 10:13:18

21 A. No. 10:13:19

22 Q. You're not an appraiser? 10:13:19

23 A. Correct. 10:13:21

24 Q. You've never been a licensed 10:13:21
25 appraiser, right? 10:13:26

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2 A. Correct. 10:13:27

3 Q. You have no designations from 10:13:27
4 any appraisal or real estate association 10:13:29
5 whatsoever, right, sir? 10:13:29

6 A. Correct. 10:13:30

7 Q. You have no awards from any 10:13:31
8 prestigious real estate bodies, you know, 10:13:33
9 authoritative bodies or licensure bodies 10:13:35
10 or any kind of other real estate body? 10:13:38

11 A. Correct. 10:13:41

12 Q. No graduate teaching in real 10:13:41
13 estate, right, sir? 10:13:45

14 A. Correct. 10:13:46

15 Q. Have you ever built a real 10:13:47
16 estate valuation model of any sort, you 10:13:49
17 personally? 10:13:51

18 A. No, I've advised on them, but 10:13:52
19 I've never built one personally. 10:13:54

20 Q. When you say you've advised on 10:13:55
21 them, you're talk talking about the 10:13:57
22 Commonwealth of Massachusetts? 10:14:00

23 A. Yes. And then also I've 10:14:01
24 advised the FAA and been involved in 10:14:03
25 consulting about the effect of 10:14:05

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2 environmental externalities on housing 10:14:10

3 prices. 10:14:13

4 Q. I'll get into those in a 10:14:14

5 second, let me just close out some other 10:14:15

6 things. I'll put the Massachusetts thing 10:14:16

7 aside, I know that's highlighted in your 10:14:18

8 report. 10:14:20

9 You have no working knowledge 10:14:21

10 of USPAP, right? 10:14:23

11 A. For sure. 10:14:24

12 Q. All right. And you never had 10:14:25

13 any affiliation or association with the 10:14:29

14 International Association of Assessing 10:14:33

15 Officers, right? 10:14:34

16 A. Correct. 10:14:35

17 Q. You've never reviewed the 10:14:35

18 International Association of Assessing 10:14:37

19 Officers' guidelines in any shape or 10:14:39

20 form? 10:14:40

21 A. Correct. 10:14:41

22 Q. And you haven't done so in 10:14:41

23 connection with this case, right? 10:14:42

24 A. Correct. 10:14:44

25 Q. And you're not relying upon 10:14:44

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2 regression, but I'm talking about here 11:45:25

3 automated valuation models. 11:45:27

4 A. Yes, I'm somewhat familiar 11:45:28

5 with DataQuick. 11:45:30

6 Q. You've used DataQuick in your 11:45:32

7 research? 11:45:35

8 A. No, but I'm familiar that it 11:45:35

9 exists and I think a student of mine 11:45:37

10 looked at it. 11:45:38

11 Q. And that's in connection with 11:45:39

12 work you've done in supervising a thesis 11:45:40

13 graduate student? 11:45:43

14 A. As I remember, yes. 11:45:45

15 Q. When was that, roughly? 11:45:45

16 A. He finished his thesis last 11:45:46

17 month, so it would have been this year. 11:45:49

18 Q. Any other involvement with any 11:45:50

19 AVMs other than through your student on 11:45:52

20 DataQuick and the Greenfield AVM? 11:45:55

21 A. You know, I vaguely remember 11:45:57

22 that CoreLogic has one and I may have 11:45:59

23 looked at that or the student may have 11:46:01

24 looked at that, but I don't have a very 11:46:03

25 good memory. 11:46:05

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2 Q. You've never seen, you have no 11:46:05
3 understanding of how CoreLogic's models 11:46:07
4 work, right? 11:46:10

5 A. That's correct. 11:46:10

6 Q. Do you have any working 11:46:11
7 understanding of how DataQuick's models 11:46:12
8 work? 11:46:14

9 A. DataQuick, if I remember, has 11:46:14
10 a white paper that describes it. But 11:46:15
11 they take a combination of five different 11:46:17
12 methods and they never really explain 11:46:21
13 what they do. So I would say my 11:46:23
14 understanding is, I have some 11:46:24
15 understanding, but certainly not a full 11:46:26
16 understanding. 11:46:28

17 Q. And one of the modules that 11:46:28
18 DataQuick uses in some weighted way that 11:46:30
19 no one knows -- 11:46:32

20 A. I wouldn't say that no one 11:46:33
21 knows. They know. 11:46:34

22 Q. They know, all right. 11:46:35

23 A. But I can't remember as I sit 11:46:37
24 here. 11:46:38

25 Q. But one of those modules 11:46:38

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2 that's weighted in some fashion that's 11:46:41

3 proprietary to them is a tax assessment 11:46:44

4 model, correct? 11:46:47

5 A. I believe so, regression model 11:46:47

6 I would call it. 11:46:49

7 Q. All right. All right, it's a 11:46:49

8 regression model but it's a regression 11:46:50

9 model that compares tax assessed value to 11:46:51

10 sales price? 11:46:53

11 A. That's one of the inputs as I 11:46:53

12 remember, yes. 11:46:55

13 Q. All right. Have I exhausted 11:46:56

14 your knowledge about automated valuation 11:46:59

15 models with the discussion we've had of 11:47:01

16 CoreLogic, DataQuick and the Greenfield 11:47:03

17 AVM? 11:47:05

18 A. Of current ones, yes. 11:47:05

19 Q. And what about historically, 11:47:06

20 anything? 11:47:08

21 A. Well, as I said in this work 11:47:08

22 in Massachusetts, but that's a long time 11:47:10

23 ago, so I'm sure they've evolved since. 11:47:12

24 Q. Other than the testimony you 11:47:14

25 provided about the environmental work and 11:47:15

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2 A. I consider most refereed 11:51:04
3 academic research to be reputable. For 11:51:05
4 instance, I don't count law journals in 11:51:08
5 which I've published because those are 11:51:10
6 refereed by 23 year olds and they often 11:51:12
7 have to, as I understand it, publish 11:51:15
8 papers by professors that they're august 11:51:18
9 law schools. 11:51:22

10 So you can call it whatever 11:51:22
11 you want, but I don't consider that -- 11:51:23
12 reputable might be the wrong word, but a 11:51:25
13 lot of it I don't consider to be serious 11:51:27
14 academic research. 11:51:30

15 Q. As a former submissions editor 11:51:31
16 of a Law Review, I can tell you, sir, 11:51:33
17 you're absolutely right. 11:51:36

18 A. Well when I posted a article 11:51:37
19 in the Yale Law Journal they told me all 11:51:39
20 this. And I was told that's one of the 11:51:43
21 best law journals. So I figure I have 11:51:43
22 it. He said, this 23 year old said, 11:51:44
23 Professor Hausman, it's really nice to 11:51:45
24 get to decide whether we want to publish 11:51:49
25 this article and it's interesting 11:51:50

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2 besides.

11:51:52

3 So there's a sample of one,

11:51:53

4 but I drew certain inferences.

11:51:54

5 Q. I don't want to get in

11:51:56

6 trouble, but I can't help myself, you're

11:51:58

7 fun to talk with. They used to call it,

11:51:59

8 and I think they were right, the inmates

11:52:01

9 were running the asylum.

11:52:04

10 A. Yes.

11:52:06

11 Q. In any event --

11:52:06

12 A. Some of the inmates are now US

11:52:07

13 senators.

11:52:09

14 Q. I'm not going to get myself

11:52:10

15 into further trouble.

11:52:11

16 MR. HANCHET: You probably

11:52:15

17 will.

11:52:16

18 MR. RAND: I probably will.

11:52:17

19 Mr. Hanchet knows me well enough to

11:52:18

20 know I probably will.

11:52:21

21 Q. In any event, you don't

11:52:22

22 disagree that filtering of outliers is

11:52:26

23 appropriate in connection with regression

11:52:29

24 analysis, right, sir?

11:52:31

25 A. In principle, yes, but you

11:52:32

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2 need to have a principle basis to do it, 11:52:34

3 yes. 11:52:38

4 Q. You have many scholarly 11:52:38

5 research articles you've co-authored or 11:52:40

6 authored in which you yourself have 11:52:42

7 removed certain outliers on a principle 11:52:44

8 basis, right, sir? 11:52:46

9 A. Yes. 11:52:47

10 Q. And in fact, you would agree 11:52:48

11 with me that running a regression without 11:52:49

12 evaluating whether your observations 11:52:51

13 include errant or outlier data would be 11:52:53

14 kind of silly, right? 11:52:58

15 A. Well typically what you do, 11:52:59

16 sometimes it's not reported, but 11:53:01

17 typically you run with and without the 11:53:02

18 outlier data and then you see how it 11:53:05

19 affect your estimates. That's called 11:53:08

20 robustness check. 11:53:10

21 Q. Well, some people call that 11:53:12

22 sensitivity? 11:53:13

23 A. Yes, it's the same, yes. 11:53:14

24 Q. You run various analyses to 11:53:16

25 make sure that you're comfortable based 11:53:17

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2 on the sensitivities that your removal of 11:53:19
3 the outliers is not skewing or biasing 11:53:21
4 your results in some way that you think 11:53:24
5 that is inappropriate? 11:53:26

6 A. Yes, because if you bias the 11:53:26
7 results in the legal context it makes 11:53:29
8 them unreliable, of course. 11:53:31

9 Q. When you say bias the results 11:53:32
10 in a legal context it makes them 11:53:34
11 unreliable, what did you mean by that, 11:53:36
12 sir? 11:53:37

13 A. Well, it -- my understanding 11:53:37
14 is you're supposed to only put forward 11:53:41
15 reliable evidence in legal proceedings. 11:53:44
16 So if you have a systematic bias they 11:53:45
17 shouldn't be presented in my view. 11:53:48

18 Q. All right, but regressions are 11:53:49
19 based upon ultimately averaging, right? 11:53:51

20 A. Yes, it's called a conditional 11:53:53
21 expectation, so that's a fancy word for 11:53:55
22 taking an average. 11:53:58

23 Q. Right. I forgot that one. 11:53:59
24 And so if you have outliers that have 11:54:03
25 errant data, that can skew those averages 11:54:07

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2 these in. 12:02:33

3 Q. I got you. Put that aside for 12:02:33

4 a second. My question is just in the 12:02:35

5 validation phase. I want to understand, 12:02:37

6 do you have any information you can offer 12:02:38

7 me about, by number or percentage, how 12:02:40

8 many observations -- let me say it 12:02:44

9 properly -- how many, how many subject 12:02:47

10 calculations of the regression are 12:02:50

11 dropped as a result of applying the 12:02:53

12 forecast high, the high forecast error 12:02:57

13 filter? 12:03:00

14 A. I thought I knew that, but I 12:03:00

15 don't see it in my report, so I'm not 12:03:02

16 going to be able to remember as I sit 12:03:03

17 here. 12:03:05

18 Q. Okay. Well let me give you 12:03:05

19 some percentages and see if they jive for 12:03:07

20 you. 12:03:09

21 A. Sure. 12:03:09

22 Q. In Goldman, 69.98 percent of 12:03:10

23 the properties were utilized if you use 12:03:13

24 the middle 30 filter and the high 12:03:20

25 forecast error filter, that's your 30 12:03:21

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2 percent dropout rate, right, were not

12:03:24

3 utilized, sorry?

12:03:26

4 A. That sounds right.

12:03:27

5 Q. So almost 70 percent were not

12:03:27

6 utilized, right, that's your 70 percent,

12:03:29

7 right?

12:03:31

8 A. Right.

12:03:31

9 Q. All right. If you take out

12:03:32

10 the high forecast error filter, you end

12:03:33

11 up with instead of 69.98 not being

12:03:35

12 utilized, 69.82 percent not being

12:03:38

13 utilized?

12:03:41

14 A. Right.

12:03:41

15 Q. Does that seem about right to

12:03:42

16 you?

12:03:45

17 A. Yes, I was going to say my

12:03:45

18 memory is it's certainly less than one

12:03:47

19 percent.

12:03:48

20 Q. So it's a very small number of

12:03:48

21 actual runs of the AVM, correct?

12:03:50

22 A. Yes.

12:03:52

23 Q. And did you do any analysis on

12:03:52

24 those particular properties that are

12:03:56

25 dropped of that small number, as to

12:03:57

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2 whether they were errant or outliers of

12:03:59

3 any shape or form?

12:04:01

4 MR. KLAPPER: Objection.

12:04:03

5 A. Not that I remember and I

12:04:05

6 didn't remember Dr. Kilpatrick doing any

12:04:07

7 either, so.

12:04:09

8 Q. I appreciate that. But let me

12:04:10

9 stay with you. Did you do anything?

12:04:12

10 A. Not that I remember, no.

12:04:13

11 Q. Did you not think that was

12:04:14

12 important to do in evaluating whether it

12:04:16

13 was appropriate to remove in a principled

12:04:17

14 way, you know, data from the regression

12:04:21

15 run?

12:04:24

16 A. No, my view was what I was

12:04:24

17 trying to demonstrate or trying to

12:04:27

18 understand, trying to analyze, was Dr.

12:04:30

19 Kilpatrick dropped out these properties

12:04:33

20 and my memory and my understanding is

12:04:34

21 that he did no analysis to see whether

12:04:39

22 there was anything wrong with those or

12:04:44

23 whether they were on the beach. And so

12:04:46

24 all I'm trying to do here is to say if

12:04:48

25 there's no verification let's see how

12:04:51

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2 because there's something errant about
3 them?

13:13:45

13:13:47

4 A. Yes, we discussed that before.

13:13:47

5 Q. Correct.

13:13:48

6 A. You don't want to remove
7 something because it happens to be on the
8 shore line and the regression model has a
9 large error.

13:13:49

13:13:51

13:13:53

13:13:54

10 Q. Okay, understood. Did you
11 actually look at any of the individual
12 properties that were removed in any of
13 the three cases, Goldman, HSBC or Ally,
14 that were removed as a result of the
15 cross-validation filter?

13:13:55

13:14:09

13:14:13

13:14:15

13:14:19

13:14:21

16 A. I looked at some of the
17 observations, but I did not try to get
18 behind them and get more information to
19 see, you know, whether they were likely
20 to be an error or not.

13:14:23

13:14:25

13:14:27

13:14:29

13:14:31

21 MR. RAND: Let me place this
22 in front of you as Exhibit 42212.

13:14:50

13:14:52

23 (Hausman Exhibit 42212 for
24 identification, extract from Dr.
25 Kilpatrick's reports in the three

13:14:55

13:15:06

13:15:10

13:15:11

13:15:03

10	But I want to ask you if the	13:15:23
11	sales prices, you know, given the	13:15:27
12	appraisal values and the sales prices,	13:15:29
13	for instance, in any, in these extracts	13:15:32
14	of the types of properties, or the types	13:15:35
15	of characteristics for properties that	13:15:38
16	you'd want to remove in connection with	13:15:39
17	running any robust predictive regression	13:15:41
18	model? I have your property that's a	13:15:44

[illegible]

25	MR. KLAPPER: Objection. You	13:16:10
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2 can answer. 13:16:11

3 A. Okay, so I haven't seen these 13:16:11
4 before and, you know, I need to look at 13:16:13
5 them, but I do agree that a sales price 13:16:15
6 of over a billion dollars is unlikely to 13:16:18
7 be accurate. 13:16:20

8 Q. And if you go to page 2, the 13:16:21
9 HSBC ones, and you look at the appraisal 13:16:24
10 value, for instance, you have one there 13:16:27
11 where the sale price is [REDACTED] and the 13:16:28
12 reported appraisal value is [REDACTED] 13:16:30
13 also, you would agree with me that if 13:16:33
14 such a difference between sales price and 13:16:35
15 appraised value occurred that's something 13:16:38
16 that you'd want to consider excluding as 13:16:41
17 well, right, sir? 13:16:43

18 A. Yes. 13:16:43

19 Q. And again, I'm just -- how 13:16:46
20 would you go, how would you personally, 13:16:48
21 in your academic world go about excluding 13:16:50
22 these types of outliers by way of a 13:16:53
23 process, if you know? 13:16:55

24 A. Well, again, what I would do 13:16:57
25 is I would do with and without and then, 13:17:00

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2 you know, to the extent that I thought 13:17:07
3 there could be something wrong, I would 13:17:09
4 go and look at these. I mean these are, 13:17:13
5 you know, quite extreme examples, but 13:17:15
6 there might be other ones that are a lot 13:17:17
7 closer, so you would need to look at them 13:17:19
8 one by one typically. 13:17:21

9 Q. Would you agree with me that 13:17:22
10 one way you may want to go about doing it 13:17:24
11 is to compare the relationship between 13:17:26
12 sales price and appraised value 13:17:29
13 statistically? 13:17:31

14 A. Yes, that would be one thing 13:17:32
15 you might want to consider. 13:17:34

16 Q. In other words, take a look at 13:17:35
17 how appraised value is comparing to sales 13:17:36
18 price and come up with some cutoff that 13:17:39
19 you believe removes errant data? 13:17:43

20 A. That's a possibility. 13:17:46
21 Although you might want to look at sales 13:17:47
22 price alone. I mean if it's over a 13:17:50
23 billion dollars it's very unlikely to be 13:17:52
24 correct. 13:17:55

25 Q. Well that would certainly be 13:17:55

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2 one filter you could apply originally, is 13:17:57
3 just if it's over a billion dollars and 13:17:59
4 many hundreds of million dollars for 13:18:01
5 subprime mortgage property? 13:18:04

6 A. Right, it would have to be at 13:18:04
7 157 to be in the hundreds of millions. 13:18:06

8 Q. Right. But then also, to the 13:18:08
9 extent that you're getting the sales 13:18:10
10 prices that look, are below a million, do 13:18:11
11 you agree with me that evaluating the 13:18:15
12 difference between appraised value and 13:18:16
13 sales price would be a useful and 13:18:18
14 efficacious way of going about evaluating 13:18:19
15 errant data? 13:18:22

16 MR. KLAPPER: Objection. 13:18:24

17 A. Could I have that read back. 13:18:24
18 You said the sales price is less than a 13:18:25
19 million? 13:18:29

20 Q. Yes, in other words, as we 13:18:29
21 get out of the very extreme areas. 13:18:30

22 A. No, then I think you really do 13:18:31
23 have to be careful because you do run 13:18:33
24 into these situations, you know, in which 13:18:35
25 houses can sell for a million dollars. I 13:18:38

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2 calculated sigma, sir, am I correct that 15:07:21

3 you ran, you ran the regression on the 15:07:23

4 observations, utilized the 15:07:26

5 cross-validation filter of .25 to get the 15:07:30

6 remaining observations that would be 15:07:36

7 utilized, correct? 15:07:37

8 A. That's my memory. I hope we 15:07:39

9 did that. But I'm not -- 15:07:41

10 Q. That's what you did? 15:07:42

11 A. Yes, absolutely sure. 15:07:43

12 Q. That's what you did and that's 15:07:44

13 how you calculated the values you were 15:07:46

14 utilizing, right? 15:07:48

15 A. Right. 15:07:49

16 Q. All right. When you did your 15:07:49

17 cross, your prediction error adjustment, 15:07:50

18 your cross, your back transformation 15:07:53

19 adjustment, you took the cross-validation 15:07:55

20 filter out, right, sir? 15:07:57

21 A. I believe so, yes. 15:07:59

22 Q. And why is it that you did 15:08:00

23 that? 15:08:02

24 A. Because what you want to do is 15:08:02

25 to say I want to predict the house values 15:08:04

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2 and you can't just -- you shouldn't throw 15:08:06
3 away observations, you should say here's 15:08:08
4 my sample and if I'm going to predict the 15:08:10
5 values what am I going to get. 15:08:12

6 Q. And why is it -- 15:08:14

7 A. So in other words -- 15:08:16

8 Q. Go ahead, please. 15:08:17

9 A. If you look at the 15:08:18
10 securitizations, no one says we're not -- 15:08:19
11 we're going to discard all the 15:08:21
12 observations in the securitizations 15:08:22
13 because they, you know, don't fit under 15:08:23
14 the 0.25 cross-validation, you're going 15:08:25
15 to -- what you want to do is look at 15:08:29
16 pretty much everything in the 15:08:31
17 securitization. 15:08:32

18 Q. Why didn't you just run the 15:08:33
19 regression without the .25 CV filter? 15:08:35

20 A. I was doing what Dr. 15:08:38
21 Kilpatrick was doing, so. 15:08:41

22 Q. Okay. But if you wanted to be 15:08:42
23 -- if you don't believe the 15:08:44
24 cross-validation filter is appropriate -- 15:08:45

25 A. I never said that. 15:08:47

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2 Q. Oh, I'm sorry? 15:08:48

3 A. No, I've never said that the 15:08:49

4 cross-validation -- you know, I -- he may 15:08:50

5 have explained somewhere in his 15:08:53

6 deposition how he got to that and I don't 15:08:54

7 have memory that he said in his report, 15:08:58

8 but he might have, how he got to 0.25. 15:09:00

9 But in principle, you know, he can use 15:09:05

10 that. I don't -- you know, I can sort of 15:09:08

11 understand what he's up to. 15:09:11

12 Q. So you don't disagree that 15:09:12

13 using some sort of validation filter of 15:09:13

14 the sort Dr. Kilpatrick used can be 15:09:16

15 appropriate? 15:09:18

16 A. Yes, it's just I don't have 15:09:18

17 memory and I don't think he ever 15:09:20

18 explained, but I might be wrong, where he 15:09:22

19 came up with the 0.25. 15:09:24

20 Q. So you might well agree with 15:09:26

21 him that using the cross-validation 15:09:27

22 filter is appropriately fine if he is 15:09:28

23 able to articulate a basis for it in his 15:09:30

24 judgment? 15:09:32

25 A. And if you have a good value, 15:09:33

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2 yes.

15:09:35

3 Q. And when you say have a good
4 value, what do you mean?

15:09:35

15:09:37

5 A. Well, there are ways, there
6 are scientific ways to come up with
7 cross-validation filters, which we can
8 have a discussion on, but it would be
9 better over a beer, so to use 0.25, and
10 as I say he may have explained it and I
11 may just not remember, but there should
12 be some explanation of how he did it.

15:09:38

15:09:39

15:09:42

15:09:44

15:09:46

15:09:49

15:09:51

15:09:52

13 Q. All right. Okay, but so, so
14 I'm still struggling. So you agree that
15 it's appropriate to use some sort of
16 validation filter to remove errant or
17 outlier observations from the final run
18 of the AVM, correct?

15:09:55

15:09:55

15:09:57

15:09:59

15:10:03

15:10:06

19 A. No, I can see doing that.

15:10:07

20 Q. That's standard practice?

15:10:10

21 A. Well, sometimes, yes.

15:10:11

22 Q. You've done that?

15:10:12

23 A. Yes.

15:10:13

24 Q. In your research work?

15:10:13

25 A. Yes.

15:10:14